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* INDIANA SINCLAIR-TIMEX NEWSLETTER *
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May-June 1992

Editor - Frank Davis
Assist - M. Felerski
Publisher-Carol Davis

This issue....

MEETINGS OF ISTUG

The July meeting will be on July 25th , 1:30 PM at the Eagledale Public Library. For those who need directions call Paul Holmgren at 317-291-6002 or Frank Davis at 317-473-8031. All meetings, unless notified otherwise are held the last Saturday of each month, at 1:30 P.M. at the Eagledale Public library. The meeting for August will be held at the same time and place on the 29th of August. The meeting for September is the 26th, same time and place. For those who are new or have not been to a meeting for awhile, please take some time out to join us this day. You are always welcome to bring a guest, either family or friends. ISTUG meetings are not tightly ran as a club with Roberts Rules of Order. They are for getting help with a computing problem, showing off that new hardware or software, and for finding out what is happening in computing. We do not bite, nor do we try to be gurus. Friends helping friends. See you there! As Jack Dohany once told an unruly crowd "this is supposed to be fun, not so serious!" I do agree. When I asked in the last issue of our newsletter as to whether anyone was willing to hold the club picnic at their place for this summer,the only response I got was from Mike Felerski, and he lives in Cincinnati, Ohio. I myself would be willing to go that far, but what about the rest of you? Short of accepting that order, or a new one arising, it appears that the picnic may not happen this year. Paul will not be at the June meeting due to the fact that he will be at a Jaycees convention out West. See you in July, Paul.

A Short Note from Mechanical Affinity

Recently Mechanical Affinity has acquired a supply of Z88s (some in need of repair, but soon to be in good shape) and a few other new accessories for them, such as travel cases, Mac to Z88 cables, power supplies, 32K, 128K and 512K ram cards. Looking for a bargain on such items, then give Frank Davis a call at 317-473-8031, evenings or weekends. On most items, the profit margin is so small, that the business precludes returning long distance calls when you find no one is home, so please try again. Address is 513 E. Main, Peru, IN 46970. New QL items, also in stock from England and Germany.

THE DAYTON COMPUTERFEST FOR SINCLAIR USERS

by Frank Davis

As I am sure, most, if not all of the readers of this newsletter know, I am involved in Sinclair activities other than this newsletter and ISTUG. I started this group with the help of my wife, Carol, and friends, Paul Holmgren and Willie Jones in 1986. In that year I also gave impetus to the first national Sinclair Computer show in Ohio and the next year in Indiana. Since then other shows took place around the country. I no longer have the time to devote to a show that is all Sinclair, that I would be producing (it takes a couple hundred man hours to pull one off), but I have continued to support any show that has a spot in it for Sinclairs. This year that will be at Dayton , Ohio at the Hara Conference and Exhibition Center, 1001 Shiloh Springs Road, Dayton, Ohio. It will be held Saturday, August 29th and Sunday, August 30th. A section is once again being set aside for Sinclairs. UPDATE Magazine, of which Carol and I edit and produce, will be there. Mechanical Affinity will have several tables of Sinclair and Cambridge items for sale. ISTUG will be there, and Paul Holmgren will be there representing QUANTA. Bill -Angel will also have a table there selling items, and the DMA Sinclair Group from Dayton. Gary told my wife others plan on being there, but as I did not get to talk with him, I am unsure of just who at this time. We will be once again staying at the Red Roof Inn nearby. Andy Hradesky, of Colorado tells me some of them will be making the trek East to join us.

These shows are a great time for us to get together and to see what you buy before the purchase. Of the people who attended last year, I personally know of only one person who seemed not to enjoy it and he left on the first day and did not seem the friendly sort to start with. That just seemed to be a personal problem. Come and enjoy this for yourself, not for what others have to say. They tell us that last year they had about 15,000 in attendance. My biggest complaint would have been that we were placed near the back of the show, so folks had to walk aways to find us. Maybe...they will give us a better location this year.

QL News and Rumours--A New QL...QL at 24 megaherz

Checking with the last couple of issues of IQLR, I see that it looks as if Miracle Systems is hard at work getting ready to spring some new items on the world. They are working on an improved video board for the QL to give it VGA graphics capability, an improved true serial and parallel port, and a new and improved clone of the QL that will offer all of the above, along with all we have come to love from the Gold Card. For those who have rushed off in recent times and bought an IBM, they will have a board that you can plug in and use that IBM as a QL.

Eros Forenzi, in the last issue of QUANTA, June 1992, discussed a poke he had been told would speed a Gold Carded QL from 16 megaherz to 24 megaherz. He did it on a red Gold Card with a JS ROM. Some folks have tried this and said it did not work for them. Suggestions are that they may need a ROM change, or a ceramic replacement for the ZX8031 chip, or might change the 8049 chip from either an NEC or a Phillips. I have not been able to get this to work on my QL, as of yet. The poke for those who wish to try it is, POKE 114796,0, and press <ENTER>. It will either work, or it will crash your machine. For more info on this check out the June issue of QUANTA. It would be silly not to just go ahead and join or rejoin QUANTA.

SOVIET BLOCK CRUMBLES: SPECTRUM SECRETS UNCOVERED!

COMPILED AND REDRAFTED BY MIKE FELERSKI

Although we seem to concentrate on the TS2068, many if not all of us have some sort of Spectrum ROM or emulator on our TS2068 (or even QL and IBM PC). The following is a group of Sinclair Spectrum tips which were found in the September 1989 issue of the LISTing newsletter. These tips came from the National Software Library, 42 Harefield Road, Chean, Surrey SM2 7NE, UK and were submitted by several of their members...

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

- LET a=USR 3280

or

- LET a=USR 3582

Scrolls the screen display up one line. Use a FOR/NEXT loop to scroll several lines.

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

- LET a=USR 3330

Scrolls page to top line,

- LET a=USR 3583

Scrolls bottom half page one line,

- LET a=USR 3652

Clears top half of the screen,

- POKE 23562,1

Provides a fast auto repeat, and

- POKE 23561,0

Disables the auto repeat,

- INK 9

Sets INK to contrast PAPER color.

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

As mentioned before, the following POKE allows cassette SAVEs to be executed without having to "Press a Key" in order for the SAVE to begin:

- POKE 23736,181

It is recommended that a PAUSE be used to place a gap between each SAVE for the Spectrum's sake.

These little pokes are just great for home brew program input lines. Immediately before an INPUT command, POKE the MODE variable to change the character of the cursor as follows:

POKE 23617,142	Gives a £
POKE 23617,240	Gives a $
POKE 23617,252	Gives a <
POKE 23617,253	Gives a > followed by a <
POKE 23617,238	Gives a flashing balnK square
POKE 23617,223	Gives a ?
POKE 23617,190	Gives USR
POKE 23617,192	Gives BIN
POKE 23617,208	Gives DATA

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

- POKE 23624,120

This command makes the bottem two lines on the screen (22 and 23) bright giving a window effect.

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

- LET a=USR 1278

This POKE gives a LOADing pattern on the borders of the screen. A nice trick which may be usefull.

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

- LET a=PEEK 23613-2:
  POKE 23613,a

This little two step command will disable the BREAK key...But be careful!

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

- POKE 23692,n

Where n is a maximum of 255, this POKE overides the Scroll? message for n times.

OI! MAUDE SOMEONE'S GONE AND NICKED THE TIPS AGAIN!!

TIPS AND HINTS TAKEN FROM VARIOUS DEFUNCT TIMEX-SINCLAIR MAGAZINES

PRESENTED BY MIKE FELERSKI

At this point it can be said that an awful lot of tips on using and programming the TS family of computers have come and gone. Many of them appeared in CTM, TS-Horizons, ZX Computing and more by authors such as George MocKridge, W. Fred Clabuesch, Robert Aartung, and Robert Fisher just to name a few.

In my last installment of Nicked-Tips I covered some POKES and mini programs which I found and have assembeled here so that they are not forgotten. Now to continue the series, I present the the following...

POKE 23689,N

This POKE resets the PRINT position on the screen (where N=4 resets to the top of the screen, and x=3 to 24 resets to any line on the screen).

Below is a command to draw a straight line between two points...

PLOT (X1,Y1): DRAW (X2-X1),(Y2-Y1)

Here is a small program to save a screen diplay at address 57000 an recall it on demand:

```
    1 REM SCREEN SAVE ROUTINE
    5 DATA 33,0,64,17,168,222,
      1,0,27,237,176,201
   10 DATA 33,168,222,17,0,64,
      1,0,27,237,176,201
   20 FOR I=65300 TO 65323:
      READ A: POKE 1,A: NEXT I
   30 STOP
```

Once the code is POKEd you use the following calls to store and recall the screen:

STORE: RAND USR 65300

RECALL: RAND USR 65312

SAVE "SCRSAV" CODE 65300,24

I am not really sure of what use the following subroutine is, but I will give it a try. A GOTO 9999 after line 1 is run will return the elapsed time in seconds that a program has been running:

```
    1 POKE 23672,0:
      POKE 23673,0

 9999 PRINT INT ((PEEK 23672+
      256*PEEK 23673+.5)*
      100/60.1145+5)/100
```

Here is another short routine which will copy all 24 screen lines to the TS2040 printer:

```
 8000 RESTORE:
      FOR N=24500 TO 24505:
      READ X: POKE N,X: NEXT N:
      DATA 243,6,192,195,5,10
```

To use this machine code utility run line 8000 to POKE the code and call th utility with:

RAND USR 24500

Last but not least is a program line to invert the screen display:

```
 8100 FOR N=16384 TO 22527:
      LET X=PEEK N:
      POKE N,255-X: NEXT N
```

This completes my two part series on lost Timex-Sinclair tips and hints. As I dig deeper into my stacks of ancient magazines I hope to present additional programming tips in future issues of the ISTUG Newsletter. Until then, if you have any TS1000/TS2068/Spectrum tips you would like to share, please send them to:

Mike Felerski
1284 Brushwood Avenue
Cincinnati, OH 45224

Mr. Frank Davis
Editor UPDATE!
513 E. Main St.
Peru, IN 46970

4/25/92

Dear Frank,

I liked the 7-pin printer graphic in the last issue. It used a large array (SCAN,LINE,GREY), but printed the picture using the wrong method for dot matrix printers. "Dithering" is a good name for rendering shades of grey and colors by printers, but choosing which dithering method is to be used is not simple.

If you could get me a few of those arrays, even in hard copy, I would appreciate it. I think your readers might like to see what can really be done, on-screen as well as printer. I have the advanced video editors, but nothing to work with except what I can put together manually. I have some TIFF files, but they are hard to translate from IBM to TIMEX.

You know I have had grey scale desk-top capability since I first published an article about the Mandelbrot set. Those pictures were not simply screen-dumps. I would love to print a full page sized Marylin. Even a screen dump contains 64 x 44 = 2,816 elements for 17 level grey. I can tolerate entering that many values, but a recorded array is the only practical way to work. I have no idea of the array size for the video image capture board, except it is larger than screen-size.

With the screen merely an editing device, proper grey scale aspect ratios, levels, and dither method for the printer are all translated from the source array (file). In order to see what is to be printed on-screen requires a different translation. It is this difference which has caused so much pain for those who want WYSIWYG. The pain is less if both the screen and printer can be set up to 1x1 aspect ratio (square pixel method). Even then, the image sizes can be radically different, and the shape and size of the printer pins causes overlapping dots or unwanted spaces between them. Overlap causes loss of detail in dark areas. Unwanted spaces causes an irritating washed-out effect.

The screen cannot have overlapping pixels, nor appreciable space between them.

Obviously perfection is not possible, but perfectly acceptable methods do exist, including some that idealists throw up their hands at -- like the methods used with CAD.

How long will it take before someone discovers that any of the disk CAD files are complete hi-res desk-top page images?

Sure, there are other ways to format both the screen and files, but the GRAFISON printer driver and windowing functions do a lot to improve the translation between existing programs and the printed page. It should inspire graphic program writers to do a better job. Most of what I see in the desk-top publishing section is bordering on the amateurish. I can understand that. When there is no visible evidence of what quality looks like, it is easy to be enthused by minor accomplishments.

SCREEN$ saves are inappropriate when no use is made of the attribute file as occurs when advanced video color or 64 wide screens are saved as a record pair. It also wastes half the available disk space.

I wish I could have compiled the translation routines in my CAD programs, but saving and loading arrays is incompatible with the TS2068 compiler I have. I have also mislaid the manual for it so I'm normal. I could have coded everything directly in assembler, but I don't have the energy or time to do that anymore.

If you have any volunteers to do it, feel free.

Hint: I had a trial program in which I loaded and saved arrays in DOS and then copied their contents into memory locations the compiler assigned for DIM statements. Then each array space could be recovered to make room for loading the next. It is a clumsy method when implemented in BASIC, even after the array transfers have been compiled.

William J. Pedersen
The WIDJUP Co.
1120 Merrifield S.E.
Grand Rapids, MI 49507

Project Suggestions

For

T/S 1000

1. Memory
   a. Battery-backed CMOS in 8K to 40K region.
   b. Battery-backed CMOS in 16K to 48k region
   c. Battery-backed CMOS in 8K to 64K region.
   d. Battery-backed CMOS in 8K to 40K region with 8K bank-switching in 40K to 48K region.
   e. Plug-in memory cards in 16K to 32K region. (CMOS or ROM).
   f. Bank-switched CMOS in 8K to 16 K region.
   g. Revised ROM .
   h. Complete bank-switching in 8K blocks .
2. Tape Port
   a. Filter similar to Qsave or Tape Dubber.
   b. RS-232 port (Hardware & software).
   c. Optical computer interface.
   d.Teletype 20 ma. interface.
   e. Video monitor port.
   f. Connect standard serial printer (requires driver program and translation).
3. Speaker output.

4. Power Supply
   a. Regulated 6 volt input in place of 9 volt.
   b. Completely external 9 volt and 5 volt sources input at rear connector.
   c. Larger heat-sink on internal regulator.
   d. External 9 volt (or 6 volt) battery source with re-charger.
   e. LED indicator on power supply input.

5. Keyboard
   a. External standard size keyboard.
   b. Add repeat function to keyboard.
   c. Add more functions to keyboard.
   d. New keyboard with its own processor which interrupts CPU.

6. Disk Drive
   a. Adapt IBM type controller and disk drives.
   b. Write software drivers for IBM disk system.
   c. Modify operating system to accept disk commands.

7. Input/ Output Ports
   a. Expand I/O port decodeing.
   b. Attach parallel port using 8255-5 processor.

7. I/O Ports (continued)
   c. Attach parallel port using Zilog PIO processor.
   d. Attach serial port using Zilog SIO processor.
   e. Attach Digital to Analog (D/A) and A/D converters and write software.

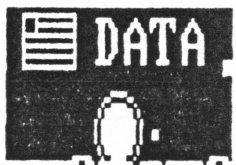
8. Video Display
   a. Provide for Inverse video (hardware and/or software).
   b. Additional font styles
   c. High resolution graphics (192 x 256 pixels).
   d. Scaleable fonts (graphics plus software).
   e. Move program Display Area to fixed location.
   f. Provide separate processor for diaplay. (Requires modification of operating system software.)
   g. Provide for 80 column display. (Would require monitor and faster hardware driver and modified software.)

9. Central Processing Unit
   a. Faster CPU (ie. Z80-B)
   b. New computer that runs faster and will emulate ZX81 so that programs are compatible but also has more capability.

10. Clock
   a. Time of day and date .
   b. Count down timer in software.
   c. Install Zilog CTC.
11. Operating System Enhancements
   a. Combine speed of Q-Save with versatility of XLR8 options
   b. Add functions to BASIC
   c. Machine code utility programs

12. Application Software
   a. Stock Analysis
   b. Graphical Plotting Program
   c. Home security system

TAKEN FROM SWYM
THE NEWSLETTER FOR SEATUG
MAY/JUN 1992



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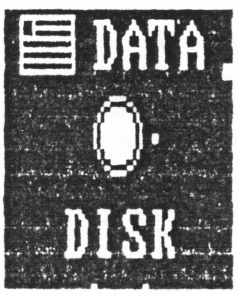

I.S.T.U.G.
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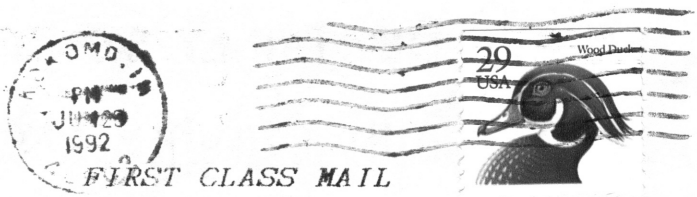
PERU, IN 46970



FIRST CLASS MAIL

Address correction requested:

Don Lambert
1301 Kiblinger Place
Auburn, In 46706

ISTUG is a not for profit, educational organization dedicated to helping users of Timex, Sinclair and Cambridge computers. We offer a hardcopy and software library for our membership along with technical assistance and monthly meetings (usually the last Saturday of the month at 1:30 P.M.). Full membership is available at $12 per year and newsletter only subscriptions at $9 per year. Send all inquiries, along with SASE, to ISTUG, 513 E. Main St., Peru, IN, 46970.